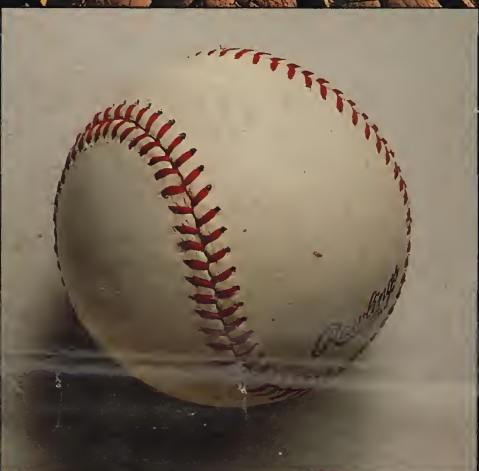
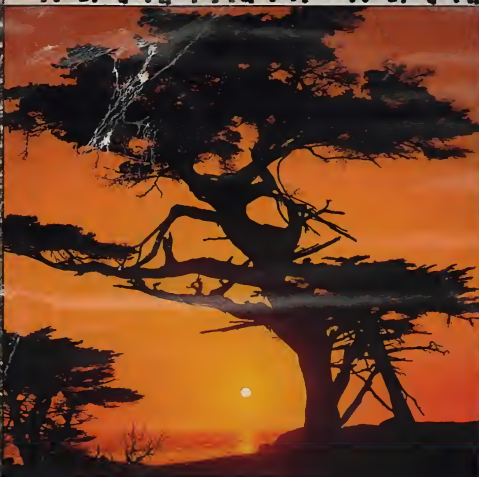
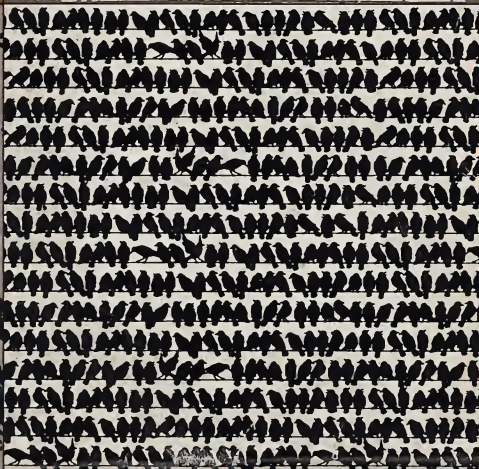
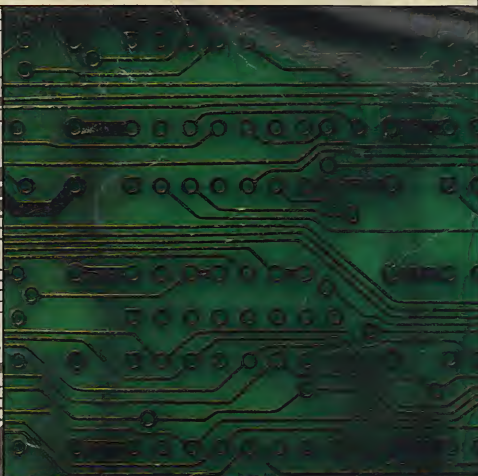
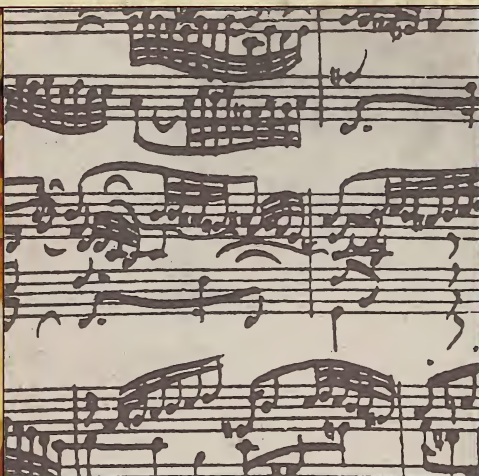


The human mind works by association.



So why don't computers?



Introducing HyperCard:

Freedom to Associate

"Oh, that reminds me of..."

"Well yes, that's just like..."

You compare one idea to the next. You dream up analogies and metaphors. You make connections.

You do it all the time—associate one idea with another. And sometimes you come to wonderful moments of understanding. Moments when you see things as you've never seen them before.

We're here to introduce you to a wonderful new technology that sparks such moments. And gives you a convenient way to communicate them to other people.

Before we go any further, we have a confession to make. We weren't the first to fantasize about making computers mimic the mind. In fact, it all started in 1945, when President Roosevelt's science advisor, Vannevar Bush, became desperately concerned about what he perceived to be a desperate problem.

The human mind, he proposed, was getting too full.

People couldn't possibly absorb even a fraction of the information around them—not in 1945 and certainly not now. Because even today, the indexing systems we've invented for storing and retrieving information force us to pigeonhole subjects into specific categories—which is a problem,

since most subjects fit into quite a few categories.

For example, does the supermarket put the chocolate syrup with the baking supplies or with the ice cream?

The human mind would put the chocolate syrup in both places—depending on the context of the moment.

Because the human mind operates by association.

What Bush envisioned to solve this little discrepancy was a wondrous machine he called a memex.

He described it as "an intimate supplement to man's memory," a sort of mechanized private library—a desk with a keyboard, buttons, levers, and

tilting translucent screens.

This machine would store—via microfilm—every scrap of information you would ever use: books, notes, pictures, newspapers, articles, documents.

You could search through information with incredible speed. You could jump from a thought book, leap to a newspaper, and go on linking ideas until you built, in essence, a record tracing your own train of thought—one that you could pass along to friends and associates. All of which would be considerably closer to the way the mind works.



HyperCard



...ed it, the human mind is in-
g from one related thought to another, follow-
ing an intricate web of associative trails: "... the
speed of the action, the intricacy of the trails, the
detail of mental pictures is awe inspiring ...

"Man cannot hope to fully duplicate this mental
process artificially," he added, "but he certainly
... be able to learn from it."

Bravo, Mr. Bush. Bravo.

Finally, somebody has.

But it doesn't come in a desk. It comes on a disk.

The technology isn't microfilm. It's Macintosh.

And it's not memex. It's HyperCard.™ We
call it a personal toolkit for managing information.

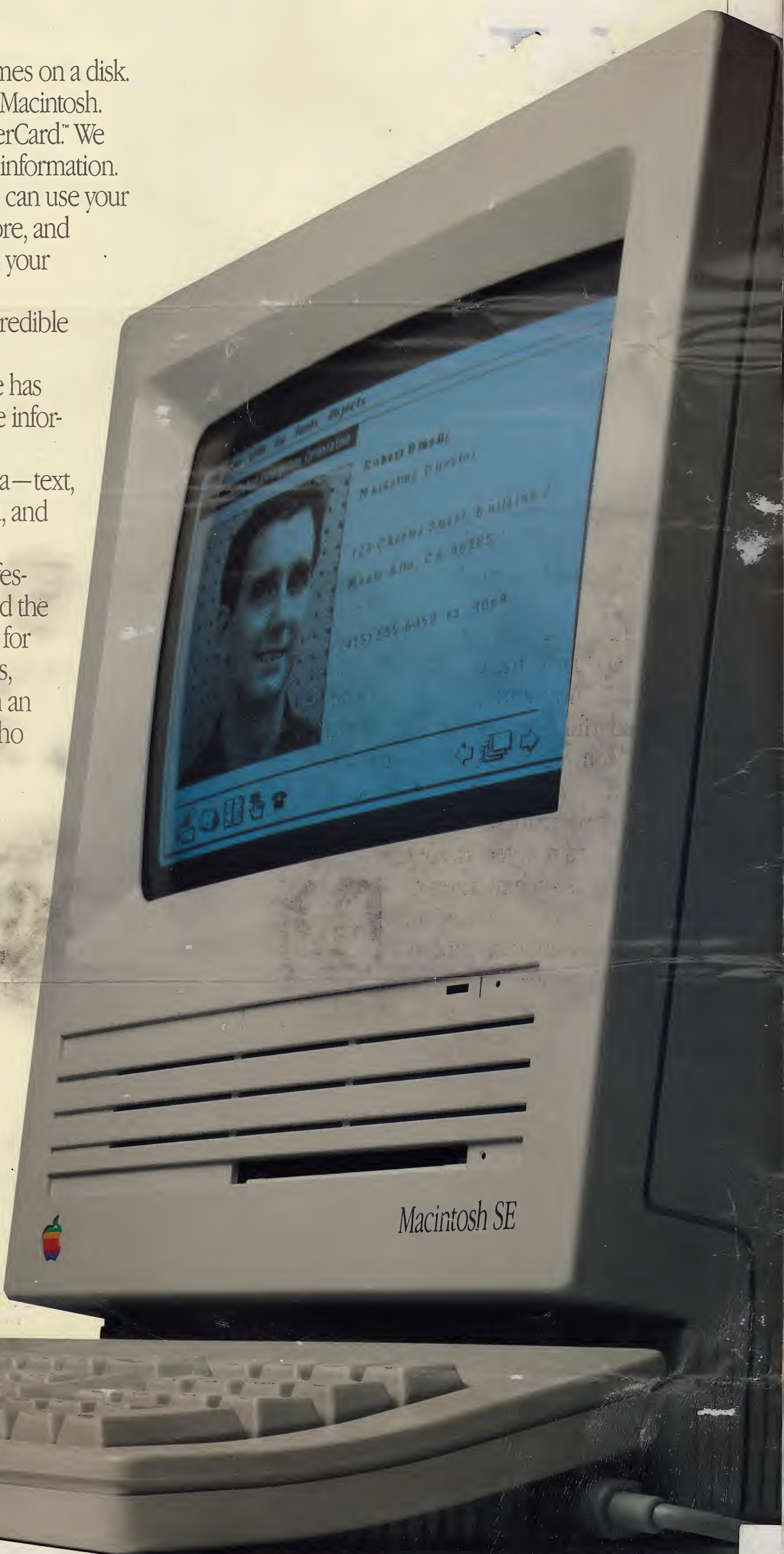
Because now, with HyperCard, you can use your
Macintosh™ computer to collect, explore, and
organize information just as you do in your
mind—by association.

You can quickly search through incredible
amounts of information.

You can modify what someone else has
created, add your own thoughts, make infor-
mation uniquely useful to you.

You can even merge different media—text,
pictures, graphics, video, voice, sound, and
animation.

And a lot of people—teachers, profes-
sors, industry specialists, the eager, and the
innovative—will now have a medium for
sharing their knowledge, their findings,
their particular thread of thought with an
even broader audience—everyone who
uses a Macintosh.



Now, one good idea can lead to another.

Our first idea was that everyone should have a personal computer. So, in 1977, we introduced the Apple® II personal computer.

Our second idea was that everyone should have a sophisticated computer that's easy to use—and one that's capable of working with pictures as well as words and numbers. In 1984, we introduced Macintosh.

Our third idea—conceived two years ago by Apple Fellow Bill Atkinson, creator of MacPaint® software—was that people should be able to organize information with their computers just as they organize it in their minds. And people should be able to write their own programs—without having to become “programmers.”

Which brings us to the fulfillment of Vannevar Bush's dream.

The introduction of what could be one of the most magical and utilitarian tools ever brought to computerdom.

HyperCard.

It can function as anything from a private, portable, computerized library to a new medium for publishing information to a fancy Rolodex® that dials your phone.

The beauty of it is that whether you're using HyperCard to ring up an associate or to publish information on disk, you only need to know three simple tools: cards, stacks, and buttons.

What's even better is that HyperCard teaches you more and more about itself, as you use it.

Cards

It all starts with a universal metaphor for dealing with information: the index card. But with HyperCard, the cards appear on your Macintosh screen. Of course, you can also print them whenever you want.

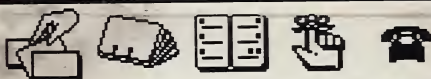
Consolidated Enterprises Orientation



Robert Binelli
Marketing Director

123 Chester Street
Building 2
Menlo Alto, CA 90285

(415) 555-6458 ext. 4069



Stacks

As you might have guessed, you keep all your cards together in stacks. These stacks constitute a new publishing medium called, logically, StackWare.™

Buttons

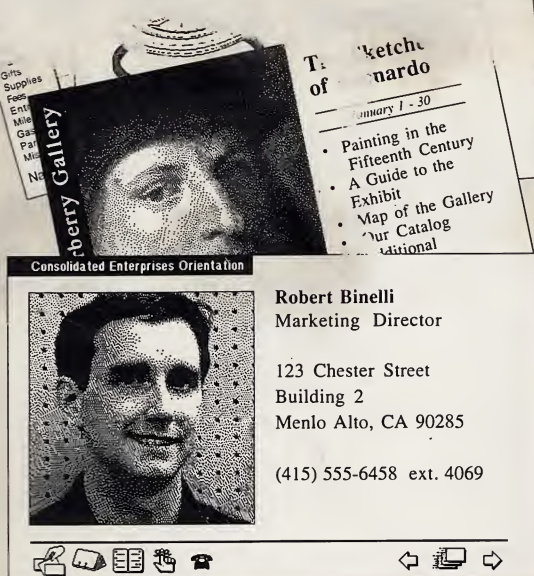
And here comes the most extraordinary part—buttons. Buttons allow you to link one card, or idea, or picture, or address, or any piece of information to any other. Think of buttons as the tools of association.

Collect ideas— your own and other people's.

Soon, you'll be able to buy information applications, or StackWare, just as you buy books, magazines, newspapers, directories, catalogs, or manuals. You can create and even publish your own StackWare right now. More on that in a minute.

Explore the stack.

You can flip through a stack of cards just as you flip through the pages of a magazine, or a book, or any other document.

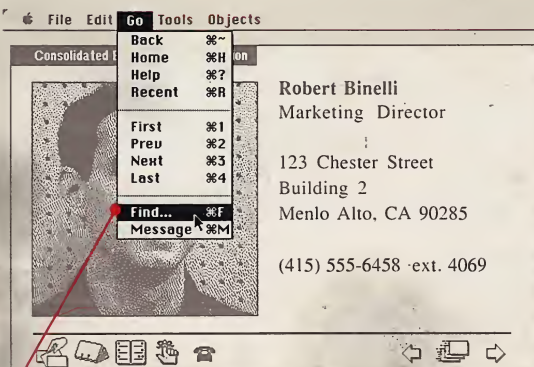


Flip forward
or backward.

Or scan automatically.

Find just what you need—fast.

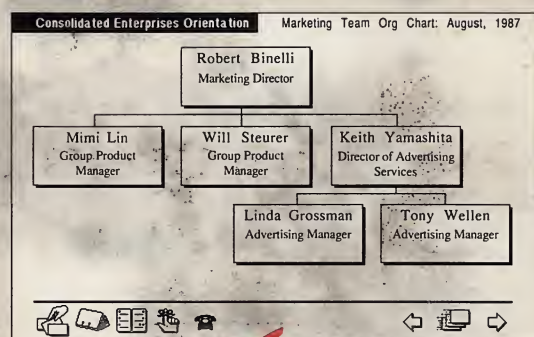
You can find any card in any stack within seconds. Suppose you want to find where Robert Binelli fits into the marketing group.



You click "Find"
in the menu...

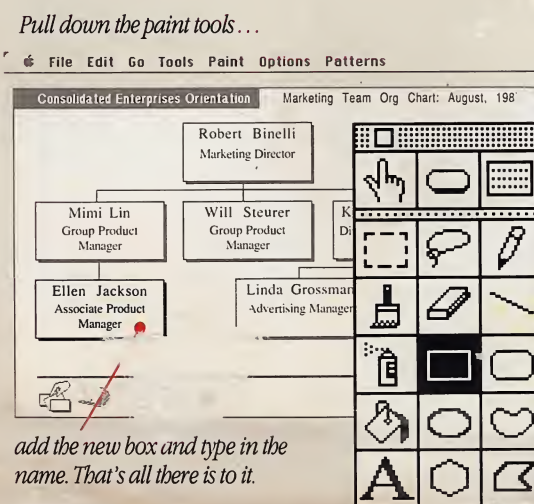
type "Marketing Org Chart"...

and here's the organization chart.



Change it— make it yours.

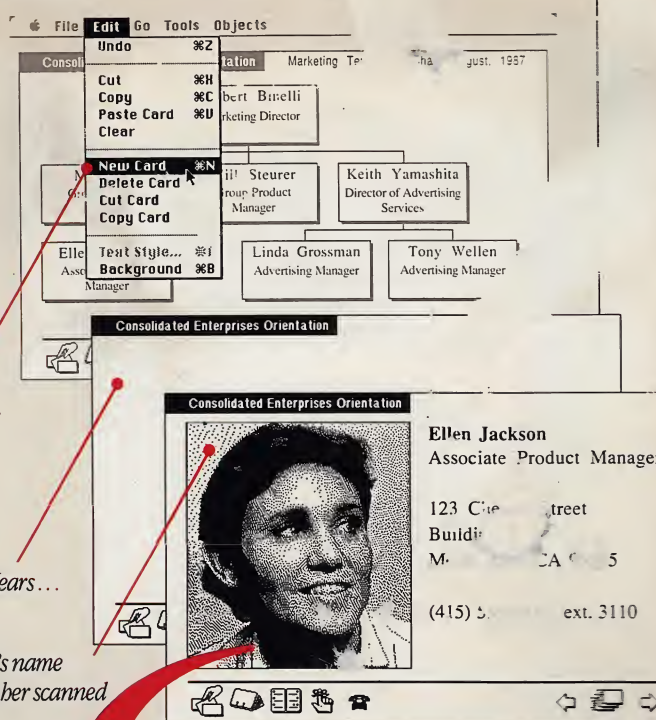
With HyperCard, you can add words, graphics, or scanned images to any card. For example, suppose you're adding a new employee, Ellen, to the marketing group.



add the new box and type in the
name. That's all there is to it.

Create new cards.

Naturally, your new employee also needs to be included in the company directory.



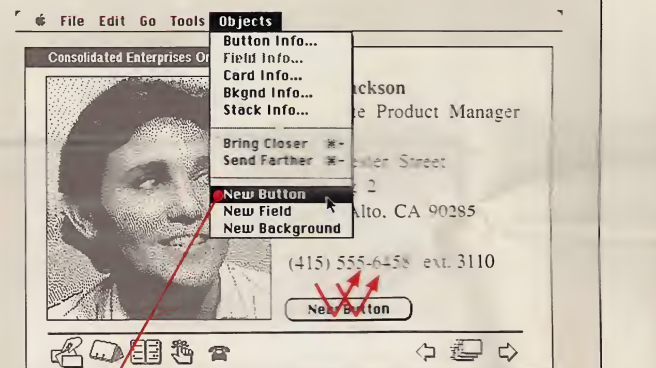
Select "New Card"
from the menu...

when the card appears...

type in Ellen's name
and paste in her scanned
photograph.

Link thoughts, one after another.

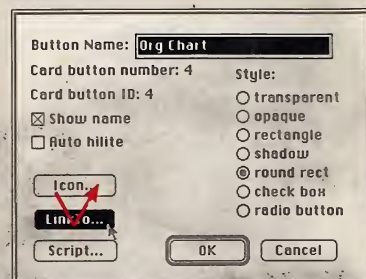
It's as easy as pointing and clicking. You do it with tools called "buttons." Suppose you want to make sure that when other people look at Ellen's card, they'll be able to find out exactly what position she holds in the marketing group.



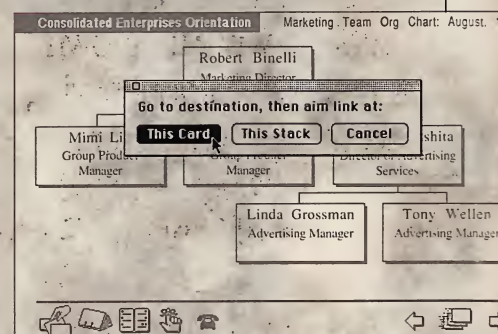
Select "New Button"
and when it appears,
click twice and you get
"Button Info"...

click "Link To"...

then find the card you
want to link to (by using
"Find" or clicking the
arrow buttons to flip
through the stack)...



and click
"This Card."



Now, every time you click the button on Ellen's
card, you'll leap instantly to the marketing
organization chart.

Push the magic buttons.

Buttons have other powers beyond linking. They can perform calculations, trigger animated sequences, play sounds, and even control a videodisc player or CD ROM drive. All you have to do to put the power where you want it is paste the button where you need it.

... dials your phone

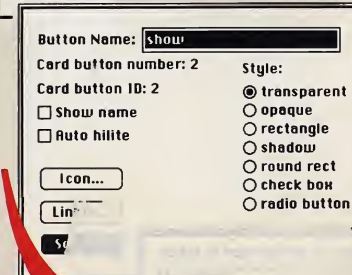
... sorts a stack

... launches another program

Write your own script.

Behind every button you'll find a script. The script tells the button exactly what to do. You can change any script or easily write your own. Some people might call this programming. To us it looks a whole lot like English. Here's why...

Click twice on the "show" button
to get "Button Info"
and then click "Script"...



add a visual
effect—
"zoom open."
Now whenever
you click on the
"show" button,
the next card
will appear with
a zoom effect.

Script of card L

```
on mouseUp
  visual effect
  show all cards
end mouseUp
```


And another...

If you think of HyperCard as Vannevar Bush thought of his memex—as a supplement to one's memory—you can imagine some of the opportunities a tool like this brings to the business world.

It gives you the opportunity to sift through information with incredible speed—and without hassles or perplexing rules. To update, edit, and interconnect different pieces of information for your own use.

And to do something never before possible with traditional computer applications: to easily develop software that's specific to the way your business operates.

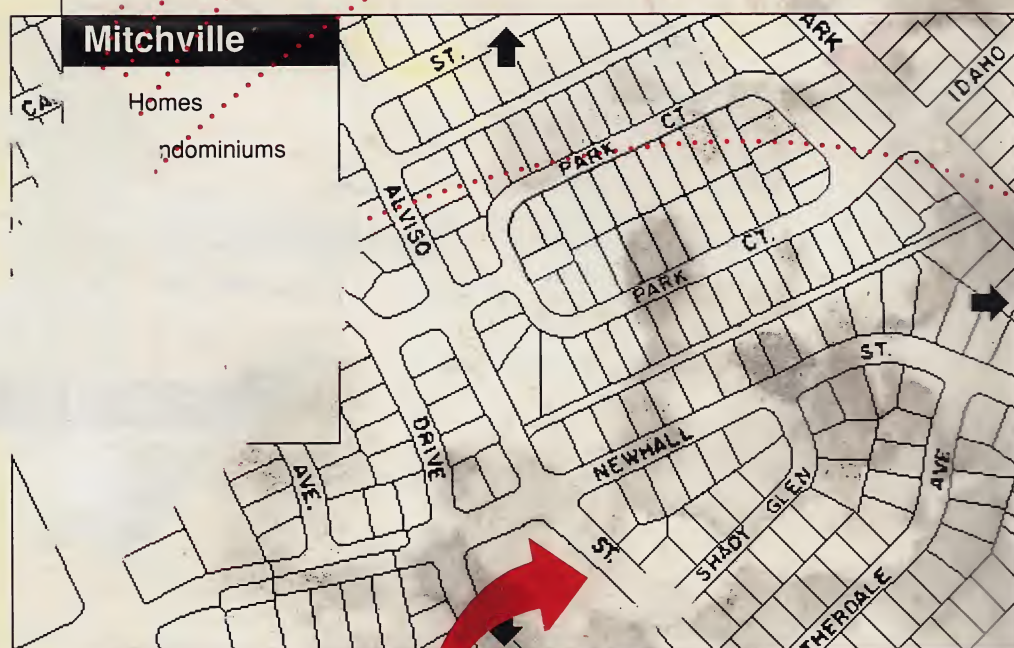
For example, consider this scenario.

You're the owner of a real estate firm. Every client who comes into your office has a slightly different set of criteria for purchasing a home. Yet, all clients want detailed information relating to their needs and their preferences.

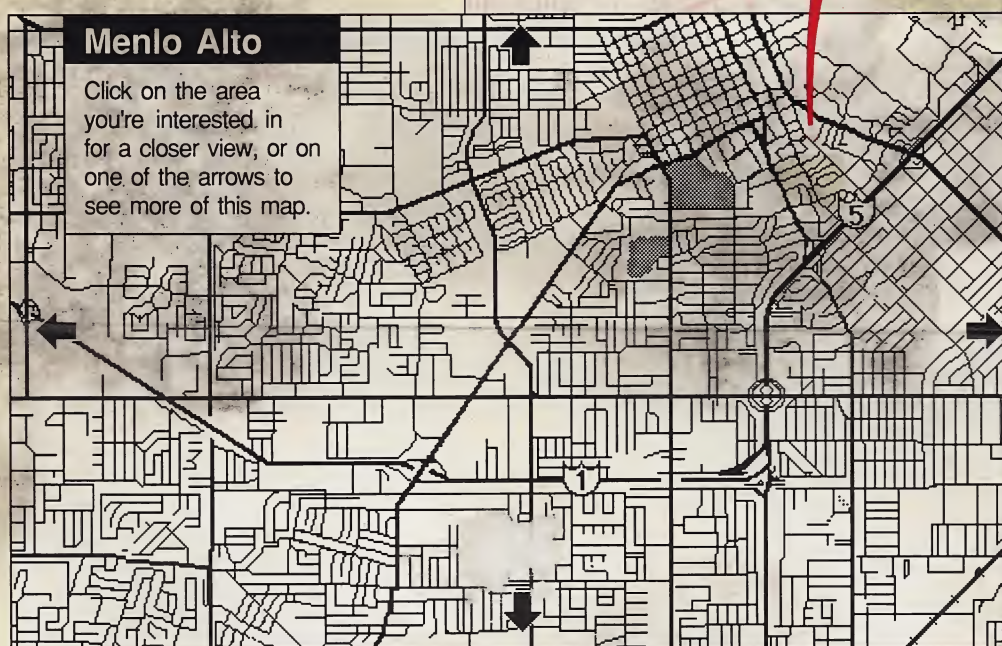
Therefore, you spend a good portion of your day whipping around your office pulling together maps, appraisals, photos, statistics, floor plans, and the like.

Wouldn't it be nice if you could put all this information in your computer and conduct a fast but thorough search based on client requests—maybe a three-bedroom home, with a large backyard, a pool, and a large oak tree?

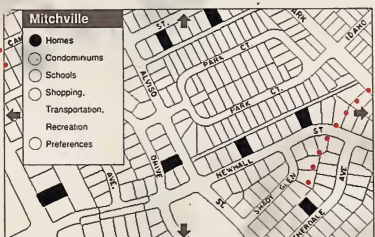
Well, now you can.



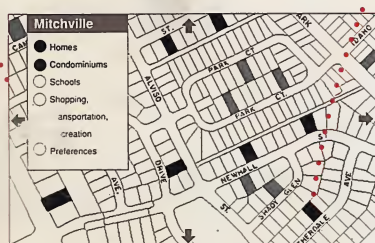
Now you can show your client different features of the neighborhood. The buttons in the box will guide you.



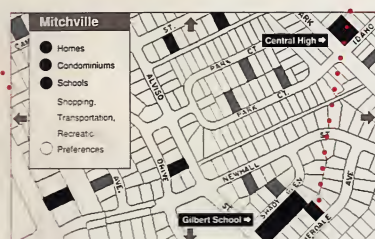
Here's a map of a fictitious city we've named Menlo Alto. Let's say your clients are interested in the Mitchville neighborhood. Click anywhere in the neighborhood, and up comes a more detailed view.



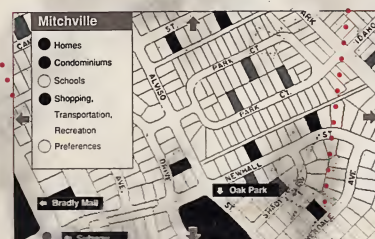
You can show which homes are for sale.



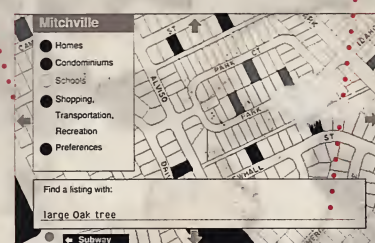
Perhaps your clients want to see condominiums as well.



Or, maybe your clients have children and want to live near an elementary school. So, you show them where the schools are in relation to homes.



And, naturally, everybody wants to know where shopping, transportation, and recreational facilities are. You can show these, too.



While you're looking at any home you can also click "Preferences" and look for specific features such as a pool, a deck, a garden, or a large oak tree. Name virtually anything and find out which homes have it.

Now that you've generated a few possibilities, you can click on any home and get a photograph of it, as well as its address, asking price, and other information.



\$300,500.00

103 Stevens Street
A. Estrada
408 555-3520

4 bedrooms, 2
baths. Yard with
large oak tree.
Near Central
High School. Built
in 1952 on 2 acres.

Floor Plan

Preferences

Back to the Map

If your clients like what they see on the outside, they might want to look at the inside.



Description

Preferences

Back to the Map

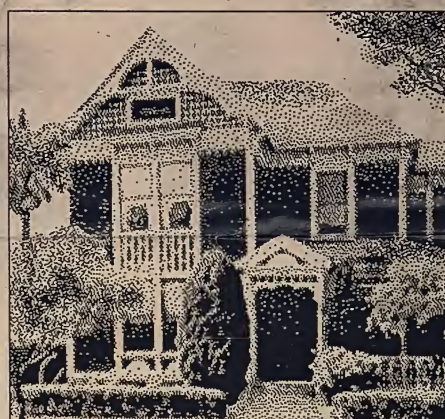
And with this program you can print a picture and floor plan of each home and, for comparison, a listing of all homes for sale in the neighborhood and their asking prices.

Listings for Mr. & Mrs. N. Raff

Price
\$300,500.00

Address
103 Stevens

Agent



\$300,500.00

103 Stevens Street
A. Estrada
408 555-3520

4 bedrooms, 2
baths. Yard with
large oak tree.
Near Central
High School. Built
in 1952 on 2 acres.

Floor Plan

Preferences

Back to the Map

Description

4 bedrooms, 2 baths.
Yard with large oak tree.
Near Central High
School. Built in 1952
on 2 acres.

4 bedrooms, 2 baths.
Yard with large oak tree.
Near Central High
School. Built 1942 on
2 acres.

4 bedrooms, 2 baths.
Yard with large oak tree.
Near Central High
School. Built 1945
on 2 acres.

4 bedrooms, 3 baths.
Back yard. 2-car
garage. Built 1959 on
2 acres.

4 bedrooms, 2 baths.
Living room with
fireplace. Built 1965 on
2 acres.

4 bedrooms, 2 baths.
Yard. Enclosed
backyard. Built 1950 on 1.5
acres.

2 baths.
K. Front
trees.
1 acre.

2 baths.
Large
lot. Built
1963

2 baths.
Yard. Built
1965

2 baths.
Yard. Built
1972

2 baths.
Yard. Built
1972

2 baths.
Yard. Built
1972

2 baths.
Yard. Built
1972



Description

Preferences

Back to the Map

And another...

Have you ever, while reading about one subject, found yourself wishing you could stop and explore a related subject? Maybe define a term you don't understand? Or leap to another source to establish a connection your intuition tells you is there?

If you're an educator, you've probably wished for some way that you and your students could explore something you're curious about—without spending half the day just trying to find the right source.

In the past, it's been a simple problem of logistics.

In the future, it won't be a problem at all.

What HyperCard provides is a much faster way to establish a relationship between ideas, facts, theories, and thoughts.

It introduces a long-awaited easy method of creating educational software. And a much simpler way to produce interactive multimedia presentations for both lectures and tutorials.

For example, imagine you're teaching a course on engineering design and innovation. For your first class, you want to show that "breakthrough" inventions are really new combinations of already existing technologies. Of course, to prove this, you'll need examples. And your lecture would probably be more effective if you could show those examples rather than just talk about them.

You have a videodisc on the history of transportation, with wonderful images ranging from photographs and illustrations of Orville and Wilbur Wright's first tenuous takeoff to video clips of Apollo 11's moon landing.

You know that if you could arrange some of these images in a particular order, they would illustrate your concept beautifully. Unfortunately, the videodisc is 7500 frames long—more than you care to wade through.

With HyperCard acting as a directory and video controller, you can sort, select, and link exactly the images you need to illustrate your concept. You

produce a dramatic 15-minute presentation incorporating photographs, diagrams, and animation sequences.

For example, you could

First horse-drawn railroad
John Mason

Steam locomotive invented
George Stephenson

Transcontinental railroad completed
Grenville M. Dodge & Samuel S. Montague

Trans-Siberian railroad completed
Sergius Witte

Steamboat invented
Robert Fulton

Internal combustion engine invented
Rudolf Diesel

Drawings & designs for flying machines
Leonardo da Vinci

First flight of large airship
Count Ferdinand von Zeppelin

The First Airplane
Orville & Wilbur Wright

First solo flight across the Atlantic
Charles Lindbergh

First jet engine
Frank Whittle

V-2 rockets
Werner von Braun

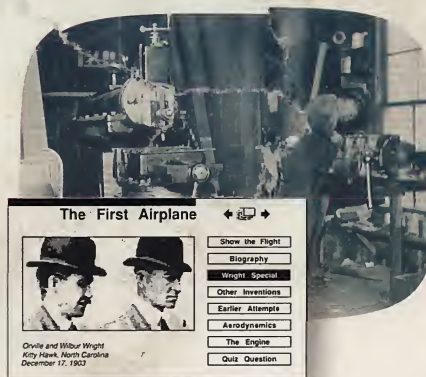
The history of transportation—organized on a HyperCard stack.

Here you can see various subjects that relate to the Wright Brothers' success at Kitty Hawk. You can move through the stack in different directions, depending on what interests you.

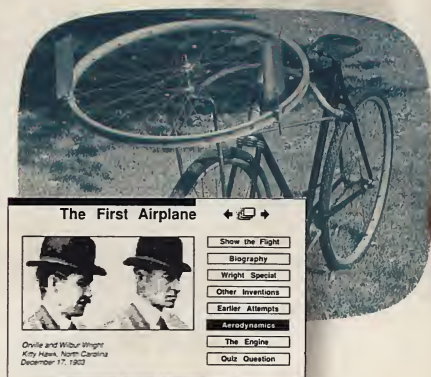
Assembly-line manufacturing
Henry Ford

First satellite orbits earth
Sergey Pavlovich Korolev

concept.



After showing the flight at Kitty Hawk, you take students back to Orville and Wilbur's fascinating lives. You show the fact that they designed their own "Special" and how



Next, you show how the brothers used a bicycle to experiment with aerodynamics. The videodisc runs a sequence showing the action of the bicycle, explaining how it works.

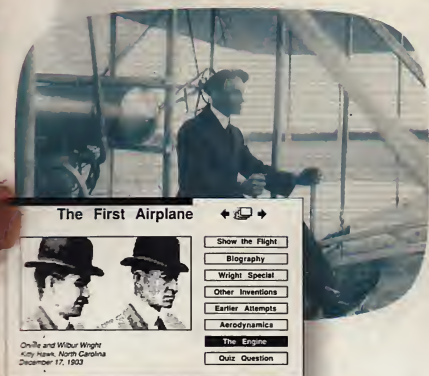


A Macintosh and a videodisc player—the start of a multimedia presentation.

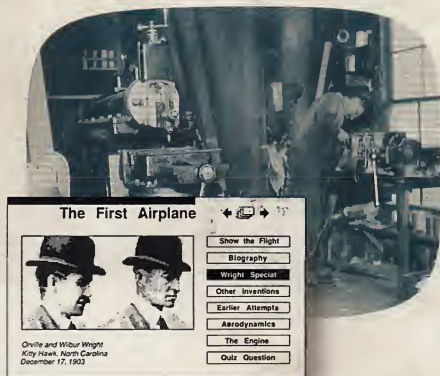
As you can see, each card on your Macintosh can locate and play several sequences of images on the videodisc. For example, you might start with the Wright Brothers' first flight and then link to related topics—films of early flights, a short biography, or a closer look at the lightweight engine.

If you want to create an interactive tutorial, you merely add questions to the cards and then guide students to different images, depending on their answers.

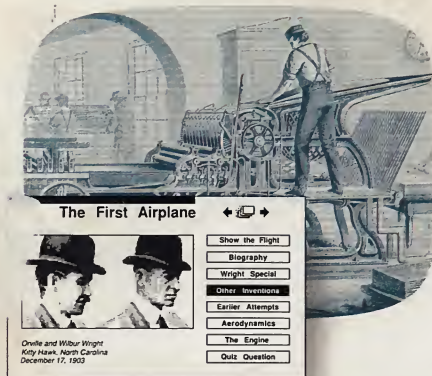
A student—exploring c



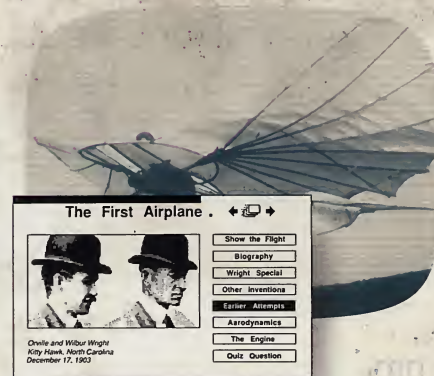
Finally, you show Wilbur at the controls of the plane and describe how the new lightweight engine made the first flight possible. You describe major parts of the engine and their function and the importance of the engine.



Impressed with your lecture, a student comes back to view more. He's thinking about a term paper that's due next week. He's interested in the Wright brothers' inventions.



He finds out that even at the tender age of 17, Orville worked with his older brother Wilbur to design an ingenious new printing press that enabled the brothers to launch their own successful newspaper, *The West Side News*.



After learning about the press, the student decides to explore more about the Wright brothers. So, he clicks on 'The Engine'.

experience about better travel.

There's no telling how far you can go.

People have been inventing more and more uses for computers since the dawn of the computer age.

Some have been sheer fantasy. Others have been extraordinarily useful.

But even where those that have been useful, there have been limits. Because until now, it has been difficult for people to sit down in front of a computer and tell it what to do.

Because that involved programming. And that meant you had to be a programmer.

Not any more.

In fact, we've put HyperCard in the hands of people in education, industry, government, and all areas in between.

People at Stanford University, Harvard University, The California State University System, The Whole Earth Catalog, Arthur Young & Company, Scholastic, Inc., Lucasfilms, Ltd., and Dialog Information Services, Inc.

And they've all reported one extraordinary result.

Now, ordinary people can sit down in front of a computer and make it do precisely what they want it to do.

Auto parts and repair manual.

Consider that you are the proprietor of an auto parts store.

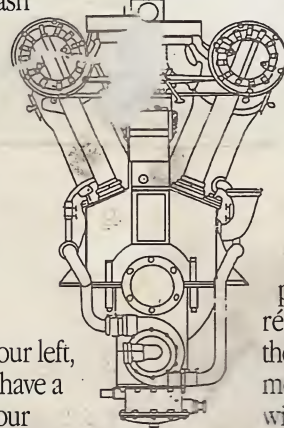
One afternoon, in comes a gentleman who says, "Something wrong with the engine of my 1974 Nash Metropolitan."

He doesn't know what part he needs or how to make the repair.

Unfortunately, neither do you—the only difference is, you're going to look like you do.

Because, just to your left, on the counter, you have a Macintosh. And in your Macintosh you have a HyperCard stack on how to repair Metropolitan.

All you do is click your mouse a few times and find the clutch in question. Then, you click on the clutch to get a description of exactly how it functions. You link to other cards that describe possible reasons for failure, possible cures, the part you need, how much it costs, and finally, how to install it—the last of which you print out and give to one very relieved and impressed customer.



Orientation programs for new employees.

The problem with most orientation programs is that they take up too much of somebody's valuable time—both in preparation and in presentation.

An orientation program written on HyperCard would not only help you inform new employees about the operations of your company, but also help you keep all employees abreast of what's going on in all departments.

For example, the orientation stack could list all employees and their phone numbers, positions, and brief résumés. All of this information could then link to a description of each department, its function, and individual roles within it.

Then there might be descriptions of the company's products or services—past, present, and future—all of which link to marketing strategies, sales reports, and even descriptions and analyses of competitors' products and strategies.

You could go into as much detail as you want until you've designed a companywide reference that's within easy reach of every employee—a reference you could update whenever you want by simply typing into it.

An oil refinery simulation.

Suppose you're managing an oil refinery and your job is to train new employees to run it. With HyperCard, you can build a stack that simulates the operation of the plant.

You could start your training with an animated diagram of oil flowing through the plant at various rates and volumes. Then show different catalytic cracking processes associated with different grades of crude.

Once your trainees cover the basic processes of the refinery, you could test their comprehension by running a series of scenarios varying volume, speed, oil type, and desired products. They will learn how a given amount of Venezuelan crude yields less gasoline than a like amount of Arabian crude. Meanwhile, HyperCard will keep track of the variables and calculate the actual quantities produced.

Once your trainees have completed the simulation, they will have a clear picture of what happens from the moment crude enters the plant to the moment products leave.

A patient history for physicians.

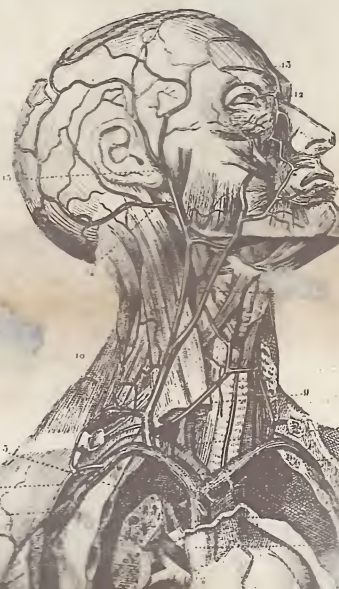
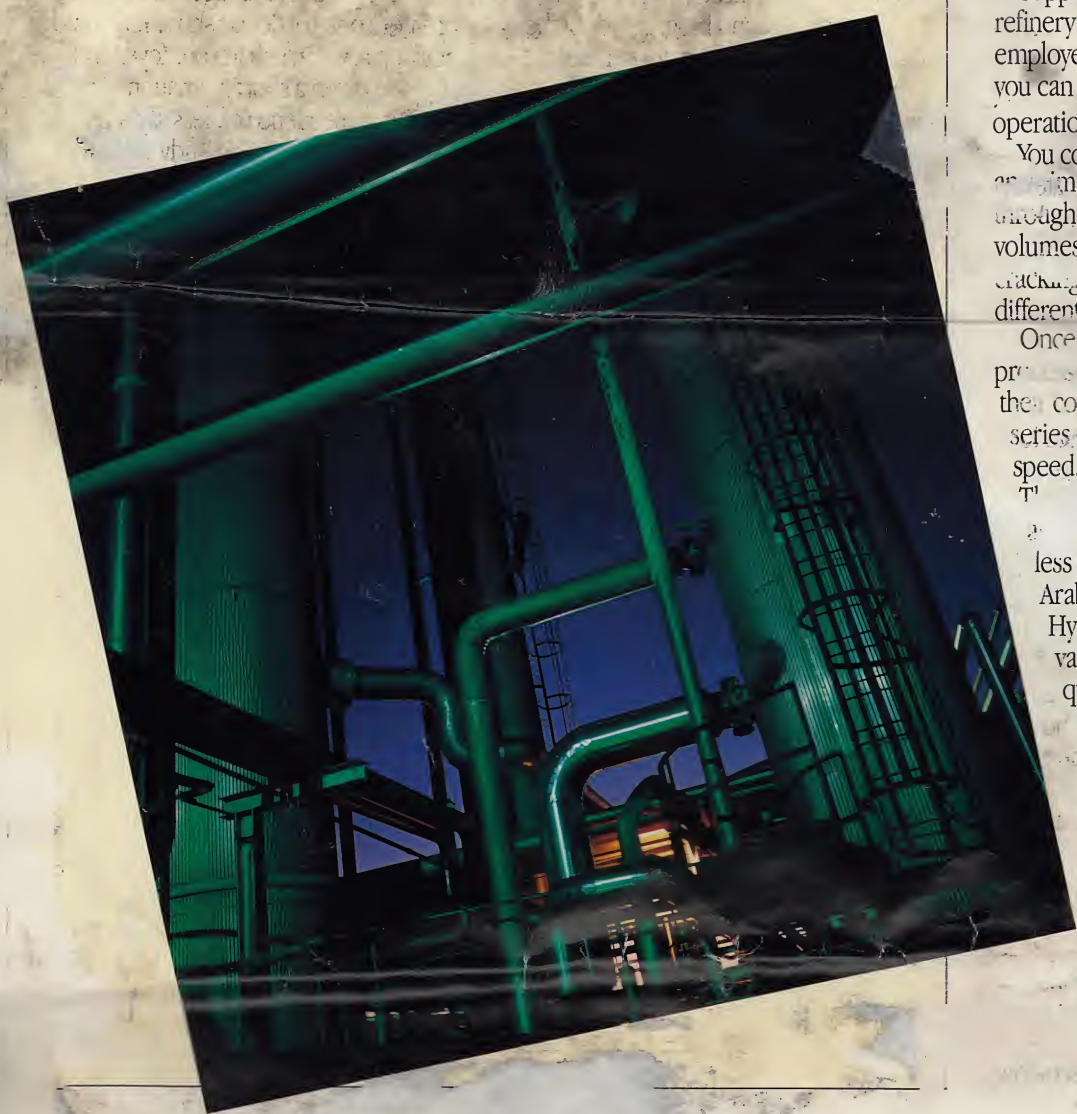
In some professions, success depends on experience—your own or somebody else's.

With this in mind, think of HyperCard as a reservoir for all your experience. Let's say you're a pediatrician.

You could use HyperCard to match case histories to descriptions of disease—and then to possible

causes, to drug reactions, to complicating factors, or to whatever else you find important to your treatment decisions.

You could then turn to a stack on the anatomy of the human body, one that allows you to click on various parts—progressing, card by card, to a view and description of each muscle, organ, and bone.



Imagine how much more efficient and your assistants could work if all your resources were stored in the form of HyperCard stacks.

Whenever you begin researching and building an argument for a case, you could quickly refresh your memory of similar cases and the resulting judgments by flipping through the cards or using the "Find" function to pinpoint the specific information you need.

Then, whenever you find the cases that support your argument, you could link those cases in the order you plan to present them. You could even structure your entire court presentation by creating new cards with your own notes and interspersing those cards between the case citations.

Or, if you're preparing a brief in a word processing program, you could simply copy the case citations or any other legal references you might need and paste them directly into your document.

The point is, with HyperCard, you can build your own personal library, one that traces all the thoughts and considerations you might have had in preparing each case for each client. Whenever another similar case comes along, you can quickly refer to and draw from all the notes and research you previously compiled.

And if you wanted to use HyperCard even more comprehensively, you could create a stack that linked all the cases in your office, all the attorneys handling them, all their individual time sheets, and your firm's monthly billings.



A training program for pilots.

If your company is like most, you've probably already discovered that no two employees ever come through your door with the same level of experience.

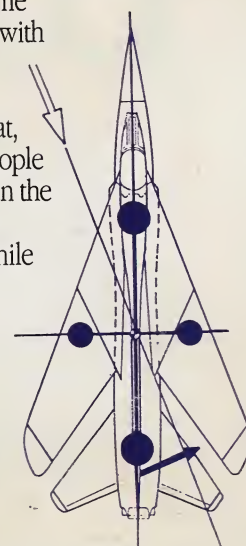
Which means that, unless you train people individually, you run the risk of talking over someone's head while putting the next person to sleep.

Not any more. With HyperCard, you can train everybody separately—but at the same time.

Suppose your job is to train airline personnel to pilot a new plane. First you would create a stack that covers all the features, functions, and special considerations pilots will need to know.

Then, within the stack, you could create links that allow each trainee to go straight to the part he or she needs to learn. You could also make the program interactive, by asking questions that guide the trainee through different cards, depending on their answers.

The bottom line is that the classroom portion of the training takes less time because you've adapted your courseware to specific individual needs.



A travel agency resource.

If you own a travel agency, you have to know a lot about a lot of different places.

You visit Amsterdam and have *Rijstafel* at the Indonesian restaurant on the Rembrandtsplatz. You save the ad from the Swiss bed-and-breakfast in Lausanne. A friend told you about a wonderful place for fly fishing just 50 miles east of Santiago.

But how can you remember all this when potential travelers come through your door?

With HyperCard you can keep a summary of all the places you visit, hear about, or get literature on—which you can constantly update and add to.

What's more, you can link cards for fly fishing in the Andes with the best restaurant in Santiago and also with fly fishing in the Adirondacks. Then you can quickly answer questions, make suggestions, and even print cards showing maps, pictures of hotels, a list of good restaurants, or whatever else your client might need to feel comfortable.

could look up anything from quiche to wienerschnitzel to chocolate mousse and find out whether a Cabernet, a Chardonnay, or a Zinfandel would best complement the dish. And you could search for recommendations based on price or country.

You might also use the stack as a learning tool or travel guide. Maybe you're planning a trip to France and want to visit a few vineyards. You could refer to a map of France showing wine regions, and perhaps click on the Bordeaux or Burgundy valley and get a detailed view of those vineyards.

Then you could click on individual chateaus and follow links to descriptions of the wines produced there, a history of the vineyards, and biographies of the proprietors. You might want to read different critiques and find out about awards over the years, when the chateau is open for visitors, the best season, and maybe even how to produce the best bottling and

information would link to similar wines produced in other countries or to other vineyards located nearby that you might want to visit.



A promotional tool and guide for an art museum.

Suppose you're the director of your city's art museum and you want to create a stack to serve as an enriching historical reference both for your visitors and for your staff.

The first thing you would do is create a stack that links images of all the pieces in your collection to biographies of the artists, to the history of the period, and maybe even to a time line covering the social, economic, and literary events that might have influenced the work.

Then you could select, from this stack, the particular images you need to promote one particular show. You could position a Macintosh in your foyer and

run a short animation sequence of, let's say, a retrospective on Andy Warhol's contribution to pop art.

In fact, you could use animated sequences for introductions to every exhibit within your museum. And you could set up the program so that visitors could point, click, and explore on their own.



A wine and cuisine encyclopedia.

This stack would be a resource for consumers, restaurateurs, and anyone who enjoys good wine and food.

The stack would include a glossary of wines from throughout the world. It would provide maps of the major wine-producing regions, from France to Australia to the United States, along with their histories and specialties. You might learn how wines are categorized for quality in each country.

In France, for example, all the best wine regions have *Appellations Contrôlées*, which serve as a guarantee of origin, production method, and grape varieties.

The stack would show you how to pair the right wine with the right food. You



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